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TITLE: SINTERING MATERIAL FOR CLADDING BY WELDING, AND ITS
MANUFACTURE

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a sintering material for cladding by welding in which the necessary energy is similar to that of the laser beam cladding by welding using powder, the three-dimensional laser beam cladding by welding which has been impossible with a conventional powder system is possible, the productivity is improved, and the cost of parts can be reduced.

SOLUTION: Powder consisting of a metal or an alloy having the composition consisting of, one or two or more elements of Fe, Cu, Al, Ti, Si, Ni, Cr, Mn, Co, Mg, B, C, V, Nb, W, Mo, Zr, Ta and Hf, and the balance inevitable impurities in manufacture, or a metal or an alloy having the composition consisting of, by weight, ≤5% C, ≤5% Si, and appropriately one or two or more kinds of elements of Cr, Mo, W, V, Nb, Ta, Ti, Zr and Hf, and the balance

one or two or more kinds of Fe, Ni and Co with inevitable impurities in manufacture, is mixed with an organic or inorganic binder, and formed by an extrusion method, and then, sintered to form a sintering material for cladding by welding which consists of powder sintering material formed of the metal or the alloy, and its porosity ratio is between 10% and 50%.

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